



Chemistry

Time Remaining: 45/45 (Minutes)

Q.1

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

The term active mass represent the concentration in:

- a. Moles
- b. Mole fraction
- c. $\text{mol}^{-1}\text{dm}^{-3}$
- d. mol dm^{-3}

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Correct Answer:

☐ A ☐ B ☐ C ☐ D

Next



Time Remaining: 44/45 (Minutes)

Q.2

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

The value of K_p becomes equal to K_c when:

- a. Total number of moles of reactants are greater than total number of moles of products.
- b. Total number of moles of products are greater than total number of moles of reactants.
- c. The difference of total moles of reactants and total moles of products is zero.
- d. The difference of total moles of reactants and total moles of products is less than zero.

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 44/45 (Minutes)

Q.3

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

For which one of the following the value of K_c is greater than K_p ?

- a. $N_2 + O_2 \rightleftharpoons 2NO$
- b. $PCl_3 + Cl_2 \rightleftharpoons PCl_5$
- c. $2SO_3 \rightleftharpoons 2SO_2 + O_2$
- d. $N_2O_4 \rightleftharpoons 2NO_2$

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Correct Answer:

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Time Remaining: 44/45 (Minutes)

Q.4

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

If $\frac{[\text{Products}]}{[\text{reactants}]}$ is less than given K_c for a reaction then:

- a. concentration of products is less than of reactants
- b. The reaction will move in reverse direction to attain equilibrium.
- c. The reaction is in equilibrium.
- d. The reaction will move forward direction to attain the equilibrium.

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Correct Answer:

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Time Remaining: 44/45 (Minutes)

Q.5

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

If K_c for a reaction is very small, then which statement of the following is incorrect?

- a. The rate of forward reaction is very low as compared to rate of reverse reaction
- b. The reaction mixture largely composed of reactants
- c. The products are highly unstable as compared of reactants
- d. The forward reaction is almost complete

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Correct Answer:

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Time Remaining: 43/45 (Minutes)

Q.6

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

The change in pressure or volume will affect the equilibrium state of the system when:

- a. System is in solid state
- b. System is in liquid state
- c. Total moles of gaseous reactants either greater or lesser than the total moles of gaseous products.
- d. Total moles of gaseous reactants and total moles of gaseous products are equal.

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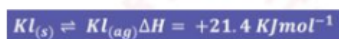
Time Remaining: 43/45 (Minutes)

Q.7

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

In the saturated solution of KI following equilibrium exist.



Which of the following condition is favorable for crystallization.

- a. Increase in pressure
- b. Decrease in temperature
- c. Increase in temperature
- d. Increasing amount of H_2O

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 43/45 (Minutes)

Q.8

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

The relation b/w K_p and K_c is given by:

- a. $K_c = k_p (p)^{-\Delta n}$
- b. $K_p = k_p (RT)^{\Delta n}$
- c. $K_p = k_c (RT)^n$
- d. $K_p = k_c (p)^{2n}$

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 43/45 (Minutes)

Q.9

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

The units of equilibrium constant (Kc. For the reaction $\text{N}_2 + 3\text{H}_2 \rightleftharpoons 2\text{NH}_3 + 92.2 \text{ KJ}$), will be:

- a. $\text{dm}^+6 \text{ mol}^{-2}$
- b. $\text{Mole}^{+2} \text{ dm}^{-6}$
- c. Mole dm^{-3}
- d. $\text{Mole}^{-1} \text{ dm}^{+3}$

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 43/45 (Minutes)

Q.10

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

In which of the following reactions K_c & K_p will have the same numerical value?

- a. $\text{PCl}_5 \rightleftharpoons \text{PCl}_3 + \text{Cl}_2$
- b. $\text{N}_2 + 3\text{H}_2 \rightleftharpoons 2\text{NH}_3$
- c. $2\text{SO}_2 + \text{O}_2 \rightleftharpoons 2\text{SO}_3$
- d. $\text{N}_2 + \text{O}_2 \rightleftharpoons 2\text{NO}$

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 42/45 (Minutes)

Q.11

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

The active mass of a solid in determining " K_c " value of a reaction is generally taken as:

- a. 10
- b. less than 10
- c. more than unity
- d. Constant

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 42/45 (Minutes)

Q.12

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

The unit of ionic product (K_w) of water is:

- a. $\text{Mole}^{-1} \text{dm}^{-3}$
- b. $\text{Mole}^{-2} \text{dm}^{-6}$
- c. $\text{Mole}^{-2} \text{dm}^{-3}$
- d. $\text{Mole}^{+2} \text{dm}^{-6}$

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 42/45 (Minutes)

Q.13

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

The P_{k_a} of CH_3COOH is 4.74. The pH of equimolar solution of CH_3OOH and CH_3COONa :

a. 4.79

b. 4.32

c. 4.42

d. 4.74

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Correct Answer:



A



B



C



D

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Time Remaining: 42/45 (Minutes)

Q.14

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

If NH_3 gas is dissolved in H_2O , pH of the solution:

- a. May increase or decreases
- b. Increases
- c. not affected
- d. decreases

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Chemistry

Time Remaining: 42/45 (Minutes)

Q.15

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

A solution is said to be saturated with respect to the electrolyte, if its:

- a. Ionic product $< K_{sp}$
- b. ionic product $> K_{sp}$
- c. Ionic product $= K_{sp}$
- d. (ionic product)² $= K_{sp}$

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 42/45 (Minutes)

Q.16

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

If CaCl_2 is added to saturated solution of Calcium Oxalate, the solubility of calcium oxalate:

- a. Decreases
- b. Increases
- c. Equal
- d. Moderate

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 42/45 (Minutes)

Q.17

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

If an acid has $pK_a = 3.4$, what will be the value of pK_b for its conjugate base?

- a. 8.4
b. 10.6
c. 12.3
d. 9.6

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Correct Answer:

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Time Remaining: 42/45 (Minutes)

Q.18

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

Which one of the following relation is incorrect?

- a. $pK_a + pK_b = 14$
- b. $pK_w = \log 1/K_w$
- c. $K_a + K_b = 14$
- d. $K_w = K_a \cdot K_b$

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 42/45 (Minutes)

Q.19

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

Which one of the following condition is required for the precipitation?

- a. $K_{sp} > \text{Ionic product}$
- b. $\text{Ionic product} > K_{sp}$
- c. $K_{sp} = \text{Ionic product}$
- d. none of given

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Correct Answer:

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Time Remaining: 41/45 (Minutes)

Q.20

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

K_p is always greater than K_c if

- a. Number of mole of reactants are greater than products.
- b. Number of mole of products are greater than reactants.
- c. If both reactants and products carry same number of moles
- d. All of these

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 41/45 (Minutes)

Q.21

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

In the formation of ammonia if pressures of the system is increased then the reaction will move in which direction $N_2 + 3H_2 \rightleftharpoons 2NH_3$

- a. moves in backward
- b. moves in forward
- c. Remains in equilibrium
- d. none

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 41/45 (Minutes)

Q.22

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

If the pH of the solution during the reaction is expected to decrease then the buffer used must possess a pH

- a. Slightly lower than the expected pH
- b. Slightly higher than the expected pH
- c. Exactly equal to the expected pH
- d. All of these

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 41/45 (Minutes)

Q.23

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

In reaction $A+B \rightarrow AB$ if the concentration of A & B is tripled then the reaction will:

- a. Increases 9 times
- b. Increases 3times
- c. Decreases to half time
- d. Decreases 6 times

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Correct Answer:

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Time Remaining: 41/45 (Minutes)

Q.24

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

When HCl is passed from a saturated solution of NaCl the solubility of NaCl is:

- a. Increased
- b. decreased
- c. not affected
- d. none

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Correct Answer:



A



B



C



D

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Chemistry

Time Remaining: 41/45 (Minutes)

Q.25

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

How catalysts decrease the activation energy?

- a. By changing path of reaction
- b. by giving energy to reactants
- c. by reacting with reactants
- d. none of given

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Correct Answer:

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Time Remaining: 41/45 (Minutes)

Q.26

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

Which reaction will proceed in forward direction to attain equilibrium state

- a. $K_c = 10$
- b. $K_c = 10^{-4}$
- c. $K_c = 10^2$
- d. $K_c = 10^{-2}$

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 41/45 (Minutes)

Q.27

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

Almost forward reaction is complete when value of K_c is:

- a. very high
- b. very small
- c. neither large nor very small
- d. zero

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Correct Answer:



A



B



C



D

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Time Remaining: 40/45 (Minutes)

Q.28

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

In which gaseous equilibrium more products will be formed by increasing pressure?

- a. $\text{N}_2 + 3\text{H}_2 \rightarrow 2\text{NH}_3$
- b. $\text{PCl}_5 \rightarrow \text{PCl}_3 + \text{Cl}_2$
- c. $\text{N}_2 + \text{O}_2 \rightarrow 2\text{NO}$
- d. $\text{H}_2 + \text{I}_2 \rightarrow 2\text{HI}$

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Correct Answer:

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Time Remaining: 40/45 (Minutes)

Q.29

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

The solubility of those salts increases with increases in temperature which have?.

- a. $\Delta H = -ve$
- b. $\Delta H = 0$
- c. $\Delta H = +ve$
- d. none of given

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 40/45 (Minutes)

Q.30

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

Maximum yield of NH_3 can be achieved by:

- a. Low pressure, low temperature and continual removal of N_2
- b. High temperature, low pressure and continual addition of NH_3
- c. High pressure, low temperature and continual removal of NH_3
- d. High temperature, high pressure and continual removal of H_2

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 40/45 (Minutes)

Q.31

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

The catalyst used in NH_3 synthesis by Haber's process is the pieces of iron crystals embedded in a fused mixture of:

- a. Cr_2O_3 , MgO , PbO_2
- b. Al_2O_3 , NiO , CO_2
- c. MgO , Al_2O_3 , SiO_2
- d. ZnO , Cr_2O_3 , SiO_2

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 40/45 (Minutes)

Q.32

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

The solubility of LiCl and Li_2CO_3 decreases with increases in temperature because their heats of solution are:

- a. +ve
- b. -ve
- c. zero
- d. very close to zero

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 40/45 (Minutes)

Q.33

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

What is the relation between K_w and temperature?

- a. K_w is independent of temperature
- b. K_w is directly proportional to temperature
- c. K_w is inversely proportional to temperature
- d. K_w is inversely proportional to square root of temperature.

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Time Remaining: 40/45 (Minutes)

Q.34

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

When 1 mole of water is dissociated into ions at 25°C, what should be the suitable value?

- a. 10^{-3}
- b. 10^{-5}
- c. 10^{-7}
- d. 10^{-14}

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Correct Answer:

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Chemistry

Time Remaining: 40/45 (Minutes)

Q.35

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

Water is a neutral compound but when an acid added to it, then in the resulting solution:

- a. $[\text{OH}^-] < [\text{H}^+]$
- b. $[\text{OH}^-] = [\text{H}^+]$
- c. $[\text{H}^+] < [\text{OH}^-]$
- d. $[\text{OH}^-] \approx [\text{H}^+]$

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Correct Answer:

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Time Remaining: 40/45 (Minutes)

Q.36

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

The acid is moderately strong when the value of K_a is:

- a. Greater than 10^{-3}
- b. Less than 1
- c. 1 to 10^{-3}
- d. None of given

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Correct Answer:

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Time Remaining: 39/45 (Minutes)

Q.37

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

Which statement is incorrect?

- a. Stronger the acid, weaker its conjugate base
- b. Stronger the conjugate acid, weaker its acid
- c. Weaker the conjugate base, stronger its acid
- d. Weaker the base, stronger its conjugate acid.

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Correct Answer:

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Time Remaining: 39/45 (Minutes)

Q.38

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

K_a value for H_2S is 1.0×10^{-7} ? What will be its pK_a ?

- a. -9
- b. 10^{-2}
- c. 7
- d. 10^{-7} .

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Correct Answer:

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Time Remaining: 39/45 (Minutes)

Q.39

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

The solubility of a less soluble salt in water is:

- a. Increased by the addition of more soluble salt
- b. Decreased by the addition of less soluble salt having a common ion.
- c. Decreased by the addition of less soluble salt having a common ion.
- d. Decreased by the addition of more soluble salt having a common ion.

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 39/45 (Minutes)

Q.40

Test 7 CHEMICAL
EQUILIBRIUM

CHEMISTRY NMDCAT

From solubility product value we can calculate:

- a. Solubility of a solute
- b. concentration of individual ions
- c. Both 'a' and 'b'
- d. None of these

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

Submit Quiz

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Q. 1

The term active mass represent the concentration in:

- a. Moles
- b. mole fraction
- c. $\text{mol}^{-1}\text{dm}^{-3}$
- d. mol dm^{-3}

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Q. 2

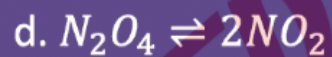
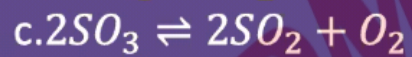
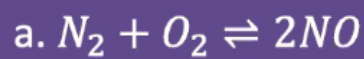
The value of K_p becomes equal to K_c when:

- a. Total number of moles of reactants are greater than total number of moles of products.
- b. Total number of moles of products are greater than total number of moles of reactants.
- c. The difference of total moles of reactants and total moles of products is zero.**
- d. The difference of total moles of reactants and total moles of products is less than zero.

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Q. 3

For which one of the following the value of K_c is greater than K_p ?



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Q. 4

if $\frac{[\text{products}]}{[\text{reactants}]}$ ratio is less than given K_c for a reaction then:

- a. concentration of product is less than of reactants
- b. The reaction will move in reverse direction to attain equilibrium.
- c. The reaction is in equilibrium
- d. The reaction will move forward direction to attain the equilibrium**

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Q. 5

If K_c for a reaction is very small, then which statement of the following is incorrect?

- a. The rate of forward reaction is very low as compared to rate of reverse reaction
- b. The reaction mixture largely composed of reactants
- c. The products are highly unstable as compared of reactants
- d. The forward reaction is almost complete**

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Q. 6

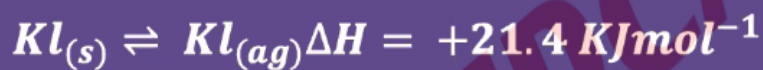
The change in pressure or volume will affect the equilibrium state of the system when:

- a. System is in solid state
- b. System is in liquid state
- c. Total moles of gaseous reactants either greater or lesser than the total moles of gaseous products.**
- d. Total moles of gaseous reactants and total moles of gaseous products are equal.

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Q. 7

In the saturated solution of KI following equilibrium exist.



Which one of the following condition is favorable for crystallization?

- a. Increase in pressure
- b. decrease in temperature**
- c. Increase in temperature
- d. Increasing amount of H_2O

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Q. 8

The relation b/w K_p and K_c is given by:

a. $K_c = K_p (p)^{-\Delta n}$

b. $K_p = K_c (RT)^{\Delta n}$

c. $K_p = K_c (RT)^n$

d. $K_p = K_c (RT)^{2n}$

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Q. 9

The units of equilibrium constant (K_c for the reaction $N_2 + 3H_2 \rightleftharpoons 2NH_3 + 92.2 \text{ KJ}$), will be:

✓ a. $\text{dm}^+6 \text{ mol}^{-2}$

b. $\text{Mole}^{+2} \text{dm}^{-6}$

c. $\text{Mole} \text{dm}^{-3}$

d. $\text{Mole}^{-1} \text{dm}^{+3}$

$$K_c = \frac{[NH_3]^2}{[N_2][H_2]^3}$$

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Q. 10

In which of the following reactions K_c & K_p will have the same numerical value?

- a. $\text{PCl}_5 \rightleftharpoons \text{PCl}_3 + \text{Cl}_2$
- b. $\text{N}_2 + 3\text{H}_2 \rightleftharpoons 2\text{NH}_3$
- c. $2\text{SO}_2 + \text{O}_2 \rightleftharpoons 2\text{SO}_3$
- d. $\text{N}_2 + \text{O}_2 \rightleftharpoons 2\text{NO}$

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Q. 11

The active mass of a solid in determining " K_c " value of a reaction is generally taken as:

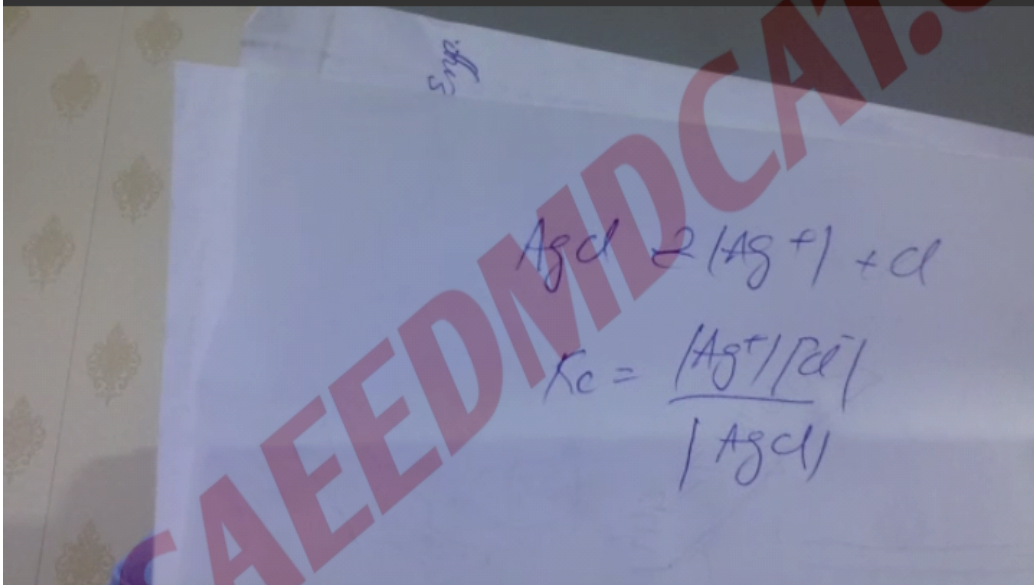
- a. 10
- b. less than 10
- c. more than unity
- d. Constant**

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Zoom

Leave



Q. 11

The active mass of a solid in determining "K_c" value of a reaction is generally taken as:

- a. 10
- b. less than 1.0
- c. more than unity
- d. Constant

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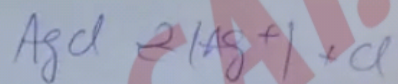
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$$K_c = \frac{[\text{Ag}^+][\text{Cl}^-]}{[\text{AgCl}]}$$

$$K_c [\text{AgCl}] = [\text{Ag}^+][\text{Cl}^-]$$

$$K_{sp} = [\text{Ag}^+][\text{Cl}^-]$$

Q. 11

The active mass of a solid in determining "Kc" value of a reaction is generally taken as:

- a. 10
- b. less than 10
- c. more than unity
- d. Constant

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Q. 12

The unit of ionic product (K_w) of water is:

- a. $\text{Mole}^{-1} \text{dm}^{-3}$
- b. $\text{Mole}^{-2} \text{dm}^{-6}$
- c. $\text{Mole}^{-2} \text{dm}^{-3}$
- d. $\text{Mole}^{+2} \text{dm}^{-6}$

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Q. 13

The PK_a of CH_3COOH is 4.74. The pH of equimolar solution of CH_3COOH and CH_3COONa :

a. 4.79

b. 4.32

c. 4.42

d. 4.74

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Q. 14

If NH_3 gas is dissolved in H_2O , pH of the solution:

- a. May increases or decreases
- b. increases**
- c. not affected
- d. decreases

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Q. 15

A solution is said to be saturated with respect to the electrolyte, if its:

- a. Ionic product $< K_{sp}$
- b. ionic product $> K_{sp}$
- c. **Ionic product $= K_{sp}$**
- d. (ionic product)² $= K_{sp}$

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Q. 16

If CaCl_2 is added to saturated solution of Calcium Oxalate, the solubility of calcium oxalate:

- a. **Decreases**
- b. increases
- c. equal
- d. moderate

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Q. 17

If an acid has $pK_a = 3.4$, what will be the value of pK_b for its conjugate base?

- a. 8.4
- b. 10.6
- c. 12.3
- d. 9.6

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Q. 18

Which one of the following relation is incorrect?

a. $pK_a + pK_b = 14$

b. $pK_w = \log 1/K_w$

c. $K_a + K_b = 14$

d. $K_w = K_a \cdot K_b$

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Q. 19

Which one of the following condition is required for the precipitation?

- a. $K_{sp} >$ Ionic product
- b. Ionic product $> K_{sp}$**
- c. $K_{sp} =$ Ionic product
- d. none of given

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Q. 20

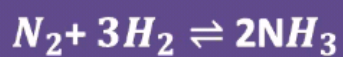
K_p is always greater than K_c if

- a. Number of mole of reactants are greater than products.
- b. Number of mole of products are greater than reactants.**
- c. If both reactants and products carry same number of moles
- d. All of these

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Q. 21

In the formation of ammonia if pressures of the system is increased then the reaction will move in which direction



- a. Moves in forward
- b. moves in backward
- c. Remains in equilibrium
- d. none

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Q. 22

If the pH of the solution during the reaction is expected to decrease then the buffer used must possess a pH

- a. Slightly lower than the expected pH
- b. Slightly higher than the expected pH
- c. Exactly equal to the expected pH
- d. All of these

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Q. 23

In reaction $A+B \rightarrow AB$ if the concentration of A & B is tripled then the reaction will:

- a. Increase 9 times
- b. increase 3 times
- c. Decrease to half time
- d. decrease 6 times

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Q. 24

When HCl is passed from a saturated solution of NaCl the solubility of NaCl is:

- a. Increased
- b. decreased**
- c. not affected
- d. none

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Q. 25

How catalysts decrease the activation energy?

- a. **By changing path of reaction**
- b. by giving energy to reactants
- c. by reacting with reactants
- d. none of given

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Q. 26

Which reaction will proceed in forward direction to attain equilibrium state:

a. $K_c = 10$

b. $K_c = 10^{-4}$

c. $K_c = 10^2$

d. $K_c = 10^{-2}$

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Q. 27

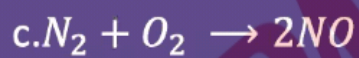
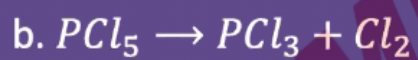
Almost forward reaction is complete when value of K_c is:

- a. Very high
- b. very small
- c. neither large nor very small
- d. zero

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Q. 28

In which gaseous equilibrium more products will be formed by increasing pressure?



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Q. 29

The solubility of those salts increases with increase in temperature which have?

- a. $\Delta H = -ve$
- b. $\Delta H = 0$
- c. $\Delta H = +ve$
- d. none of given

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Q. 30

Maximum yield of NH_3 can be achieved by:

- a. Low pressure, low temperature and continual removal of N_2
- b. High temperature, low pressure and continual addition of NH_3
- c. High pressure, low temperature and continual removal of NH_3**
- d. High temperature, high pressure and continual removal of H_2

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Q. 31

The catalyst used in NH_3 synthesis by Haber's process is the pieces of iron crystals embedded in a fused mixture of:

- a. Cr_2O_3 . MgO . PbO_2
- b. Al_2O_3 . NiO . CO_2
- c. **MgO . Al_2O_3 . SiO_2**
- d. ZnO . Cr_2O_3 . SiO_2

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Q. 32

The solubility of LiCl and Li_2CO_3 decreases with increases in temperature because their heats of solution are:

- a. + ve
- b. - ve**
- c. zero
- d. very close to zero

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Q. 33

What is the relation between K_w and temperature?

- a. K_w is independent of temperature
- b. K_w is directly proportional to temperature**
- c. K_w is inversely proportional to temperature
- d. K_w is inversely proportional to square root of temperature.

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Q. 34

When 1 mole of water is dissociated into ions at 25°C, what should be the suitable value?

a. 10^{-3}

b. 10^{-5}

c. 10^{-7}

d. 10^{-14}

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Q. 35

Water is a neutral compound but when an acid added to it, then in the resulting solution:

- a. $[OH^-] < [H^+]$
- b. $[OH^-] = [H^+]$
- c. $[H^+] < [OH^-]$
- d. $[OH^-] \approx [H^+]$

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Q. 36

The acid is moderately strong when the value of K_a is:

- a. Greater than 10^{-3}
- b. less than 1
- c. **1 to 10^{-3}**
- d. none of given

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Q. 37

Which statement is incorrect?

- a. Stronger the acid, weaker its conjugate base
- b. Stronger the conjugate acid, weaker its acid**
- c. Weaker the conjugate base, stronger its acid
- d. Weaker the base, stronger its conjugate acid.

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Q. 38

K_a value for H_2S is 1.0×10^{-7} ? What will be its pK_a ?

a. -9

b. 10^{-2}

c. 7

d. 10^{-7}

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Q. 39

The solubility of a less soluble salt in water is:

- a. Increased by the addition of more soluble salt
- b. Decreased by the addition of less soluble salt having a common ion.
- c. Decreased by the addition of less soluble salt having a common ion.
- d. Decreased by the addition of more soluble salt having a common ion.**

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Q. 40

From solubility product value we can calculate:

- a. Solubility of a solute
- b. concentration of individual ions
- c. Both 'a' and 'b'**
- d. None of these

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